The Student Perspective on Competency-Based Education:

Qualitative Research on Support, Skills, and Success

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YOUNG **INVINCIBLES**
together, invincible

September 2015

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Introduction

In an era of skyrocketing higher education costs, low completion rates, and a job market where today's young adults need career-ready skills more than ever, policymakers and advocates are exploring innovative reforms to higher education. The stakes are high for our generation as taking on student debt adds a great deal of risk to getting a postsecondary credential. In the worst cases, some programs may fail to help students gain real skills, or the credential may have little value to employers, leaving students responsible for debt they cannot repay. Reform must come from a variety of angles including: cost, time to degree, flexibility, new learning methods, and ensuring degrees have labor market value.

A newer framework, competency-based education (CBE), measures progress by having students demonstrate proficiency in a subject rather than time spent in the classroom. CBE has received interest and praise for its focus on student learning and allowing students to study at their own pace while equipping them with career-ready skills. The flexibility promises mid-career students in particular an opportunity to gain credentials while juggling jobs, families and other responsibilities.[1]

Young Invincibles set out to capture student perspectives on CBE to help policymakers make informed choices about how to improve, invest in, and expand these programs. For example, we were curious whether the flexible environment would only work well for a limited number of highly motivated students. We also wanted to explore assumptions that the model necessarily saves students time and money. We tested these and various other questions through a series of focus groups, interviews, and a survey over the past several months. We summarize the following findings in the paper below and offer policy recommendations for how to strengthen CBE research moving forward.

Key Findings From Qualitative Research:

1. **Flexibility is the hallmark benefit for CBE students. Our focus group participants highly valued the ability to study when they wanted and progress at their own pace.** Their responses suggest CBE programs deliver real benefits to students who have more challenging schedules or prefer a flexible learning environment.

2. **CBE students varied significantly in the pace they set for their programs.** Many moved faster through their programs than they expected, and several focus group participants were on pace to complete an associate's degree faster than the two-year time frame. Other students moved more slowly to work around challenging life schedules. A minority of students struggled to make progress in the low-structure environment.

3. **CBE works best for self-motivated learners who prefer setting their own schedules, but is likely not the best fit for all students.** Our survey results showed that CBE students much more consistently preferred flexible schedules than traditional students. Participants emphasized that younger, less mature, or less motivated individuals could face challenges completing the program. CBE's unique format will not work for every student.

4. **Some CBE institutions have created academic and social support programs to help students navigate the highly individualized learning environment.** Generally CBE students reported less need for face-to-face interaction than traditional students, although most wanted the ability to speak with an instructor or coach when they needed help. The best support programs offered a comprehensive mix of social and academic help.

5. **CBE students had a lot more confidence in their career preparation than traditional students, although the programs may struggle to teach certain "soft" skills.** A growing body of evidence suggests social skills like teamwork and networking are highly linked to career success. Since

CBE students work at their own individual pace, it makes group projects more difficult. However, CBE seems well placed to teach job specific skills such as coding.

6. **CBE programs costs vary by type of program, pricing structure, and financial aid eligibility.** More quantitative research is needed to answer the question definitively, though some pricing models could cost students more.

7. **Students reported few people understood what CBE was, but it did not appear to be a barrier to program recruitment.** Participants found their way in through a variety of avenues and felt they could explain how it works to peers.

Policy Recommendations:

1. **The Department of Education must get the CBE experimental sites off the ground.** These will be essential in continuing development and improvement of this promising education model.

2. **Provide clear, consumer-tested information about CBE to all prospective students.** CBE likely works best for self-motivated learners focusing on job-specific skills, and students should understand that. Communicating about social and academic supports could also help programs recruit student skeptical of the unstructured environment.

3. **Researchers and the Department of Education must further study student outcomes and financial aid delivery at CBE Programs.** Assuming CBE programs deliver the career results expected, students should have the ability to use federal financial aid in the absence of credit hour rules.

4. **Ensure that any platform or program used in CBE is technology-friendly, accessible, and optimized for mobile devices.** Fulfilling the promise of flexible, individu-

alized education will require full integration with smartphones and tablets.

5. **Ensure comprehensive academic and social supports are available for CBE learners and tailored to their needs.** Though many students in CBE prefer the flexible learning environment, academic and social supports are still critical for student success.

What is Competency-Based Education?

Currently, most institutions of higher education utilize the Carnegie unit, or credit hour, to track a student's progress through postsecondary programs. Since 1893, credit hours have been the basic unit of higher education, linking degree attainment to how much time a student spends in the classroom or working on a subject, as well as transferring credits between institutions.[2] These units or credit hours also dictate how students enroll in and receive financial aid.

While "competency-based education" has no agreed-upon definition, it is generally quite different from the traditional credit hour: students progress through programs by demonstrating competencies in an area of study. Instead of recording units or credit hours based on time, CBE records competencies, which includes knowledge and skills a student already has or is currently learning. If students can demonstrate proficiency at a particular set of skills, they pass the course or gain credit for the course toward a degree. CBE can also include prior learning assessments, where students demonstrate what they have learned in the past to move forward without having to spend time on competencies they already have. In essence, the difference between traditional postsecondary education and CBE is how results are measured, by time or by mastery of skills.

Encouraging activity at the federal level has given rise to an increase in the number of CBE programs across the country. In March 2013, the U.S. Department of Education invited institutions to submit examples of education programs that do not rely on seat time under Title IV of the *Higher Education Act*, the main law governing federal

financial aid.[3] To do this, the Department used its regulatory authority to allow some CBE students to receive federal financial aid.[4] But financial aid for these programs is imperfect because federal financial aid is still tied to time.[5] To remedy this, the White House promised to move the ball forward on CBE by urging Congress to experiment with lifting financial aid barriers.[6] However, the experimental sites are still not off the ground.[7] With some students already in CBE programs, this is an ideal time to collect information about how students perceive CBE programs and assess how well it is working for today's students.

Encouraging activity in the education technology industry also has had an impact on CBE. Many CBE students are blended learners, who spend educational time in both online programs and in-person learning environments. Moreover, many CBE programs pair curricula with new digital tools to help students learn in flexible environments that do not rely on traditional in-person instruction and seat time. However, there is no requirement that CBE be paired with online tools or new technology, and one could envision a CBE program for fields like construction, manufacturing, or other trades, some of which are key employment sectors for young adults today.[8] In an environment where policy and technology opportunities are ripe, it makes sense to step back and examine the student perspective on CBE for lessons learned and a path forward.

Caveats in studying the diverse CBE landscape

Before delving into our research it is worth sounding a note of caution: CBE programs vary widely in structure. Everything from seat time, number of CBE programs offered, pricing structure, the existing academic calendar, prevalence of student supports, and whether a program is blended or online creates differences between how institutions design their CBE courses. With many differences in the way institutions design CBE programs, students may have a variety of perspectives on CBE based on program type, institution, time to degree, or field of study. As the field expands and matures, future research will have greater opportunity to distinguish between different kinds of CBE mod-

els.

Qualitative research to assess the student perspective on CBE

Young Invincibles set out to conduct focus groups, all-day interviews, and an online survey to determine the student perspective on competency-based education programs. We intentionally asked both CBE students and non-CBE students to describe their perspective on these programs. CBE has no agreed-upon definition, so we defined it as: "CBE programs award credit for what students already know and allow them to complete courses and degrees at their own pace. Instead of traditional exams, many competency-based programs require students to demonstrate what they know through tasks and projects."

In all, we conducted three focus groups, one all-day on-campus interview, and one online survey, reaching 843 young adults. Eighty-three survey participants were currently enrolled in a CBE program. We conducted the focus groups and all-day interview on campuses across the country. We paid special attention to the unique stories from students beyond just their perspectives on CBE academics by including conversations on student support systems and the social aspect of CBE-style learning.

Match Beyond and College for America (Southern New Hampshire University)

Young Invincibles conducted all-day on-campus interviews with eight CBE students at the Match Beyond from July 23, 2015 to July 24, 2015. Match Beyond is a non-profit branch of the Match Education network in Boston, Massachusetts, which includes Match Public Charter School, the Match Foundation, and the Sposato Graduate School of Education, Inc. Match Beyond partners with College for America at Southern New Hampshire University to provide a wide range of supports for students interested in anassociate's or bachelor's degree through the CBE program.

Match Beyond uses shared office space to provide a central location in downtown Boston where

students can visit between 6:00 am and 9:00 pm to receive support while obtaining their degree. Match Beyond also provides coaches, advisors, lunch and dinner, laptops, job placement services, and personal support to students in the program. Participants are not required to use these services, but are free to come and go as often or seldom as they like.

College for America is primarily project-based, with two different paths for students to choose how they are assessed. The blue path is a smaller project with fewer competencies covered and assessed. The purple path is a more comprehensive project that assesses up to five different competencies students must master. Projects at Match beyond may look like presentations, essays, videos, or real world products like resumes and cover letters.

Salt Lake Community College

Young Invincibles conducted a focus group on May 20, 2015 with questions pertaining to competency-based education (CBE) at Salt Lake Community College. We worked with students in their CBE program. Generally, the CBE program at Salt Lake Community College is small – about 25 students total, and it is in its pilot stage. The institution plans to increase the size and scale significantly in the coming months. We worked with the administration in the School of Applied Technology to recruit students for a one-hour focus group. Two students participated in the focus group.

Students enrolled in the CBE program at Salt Lake Community College cannot receive federal financial aid. CBE students at SLCC are not required to come to campus every day, but must meet with their instructors in-person at least once a week. Instructors in the program are available for CBE students who wish to come into campus to receive additional help from 7:00 am until 9:00 pm five days a week. The facilities are structured so CBE students have places to work and receive extra help even when traditional classes are in session. SLCC also has a Program Advisory Committee consisting of instructors, employers, and other stakeholders to help determine which industry standards should be incorporated into the curriculum.

Broward College

Young Invincibles conducted a focus group with CBE students at Broward College in Ft. Lauderdale, Florida on Wednesday, June 17, 2015. We worked with the Computer Science Department and the Accelerated IT Training Program to speak with four students currently enrolled in the competency-based model. Broward's IT program intends to prepare students to take industry certifications for careers in IT. All the students in attendance were Pell Grant recipients. Broward College offers an optional Saturday session for CBE students. These sessions are moderated by an academic coach/advisor, and provide a space for students to receive additional help, work collaboratively and use school resources.

Brandman University

Young Invincibles conducted a focus group with one CBE student at Brandman University in Irvine, California on August 10, 2015. Brandman University first launched its competency-based Bachelor of Business Administration program with two pilot cohorts – about 80 students total. The institution plans to increase the size and scale significantly in the coming months with its national launch in Fall 2015.

Students access Brandman materials using an online portal, which is accessible from any computer. Brandman uses contract tutorial faculty to teach CBE programs. CBE students at Brandman also have access to coaches. Young Invincibles worked with Brandman's Office of Institutional Research and Planning to recruit students for a one-hour focus group, and one student participated in a one-on-one structured interview.

Lessons Learned and Results

Our conversations with students typically involved a series of open-ended questions around broad topics. We opened the focus groups and interviews by asking what students thought was their favorite part of their CBE programs. Flexibility

came through as the key theme in those conversations and we delve into more detail below. Other important themes we cover in this section include cost, pacing, motivation, support, and assessment. Further, we asked students a series of specific questions about how well they felt CBE programs prepared them for a job, how much employers should be involved in the curriculum, and whether friends and family had any idea what their CBE courses were. We report the key takeaways from these questions as well.

Flexibility

Flexibility is the hallmark benefit cited by CBE students. In our conversations with them, most expressed that flexibility was the main characteristic that drew them to explore their program. Nearly every student told us their favorite part was being able to work at their own pace and adjust based on learning style or other priorities in their lives, like work and family obligations.

"I like how you come in on your own time, it's flexible. I like how it's all project-based so it's not tests and what not, because in high school and middle school that was my biggest struggle."

For instance, a student at Match Beyond summed the benefits up as, "I like how you come in on your own time, it's flexible. I like how it's all proj-
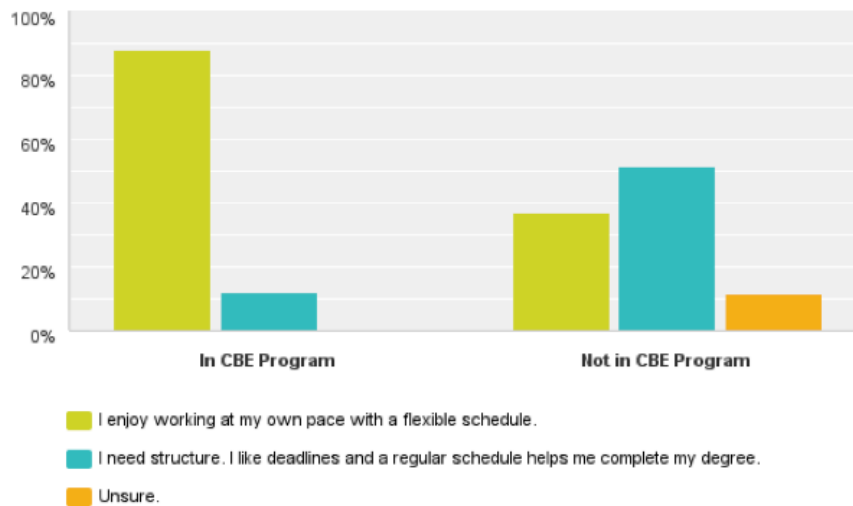
I get to do my work on my own time. I take my assessments when I need to take my assessments. I'm moving at my own pace and it's in sync with my thoughts." A Brandman student explained, "I heard about [CBE] from an employee at Brandman who described the program to me and I realized it would be a really great fit because of the flexibility. I was in another online e-program before that wasn't at all flexible—it had specific deadlines. The program was described as good for folks in the military because of the flexibility." Students universally appreciated that CBE gave them flexibility not found in traditional education programs.

Our survey data strongly supported our focus group conversations. Over 250 respondents answered both the question on whether they were in a CBE program and our question about their preferred learning style.[9] Nearly 90 percent of the CBE students said that they preferred a flexible learning environment where they could set their own schedule. In contrast, half of individuals not in CBE programs preferred a more structured learning environment. Students who choose CBE appear to have a strong preference for flexible learning environments not shared by the general

Q12 How would you describe your learning style?

Answered: 264   Skipped: 24

- I enjoy working at my own pace with a flexible schedule.
- I need structure. I like deadlines and a regular schedule helps me complete my degree.
- Unsure.

ect-based so it's not tests and what not, because in high school and middle school that was my biggest struggle." One of his classmates said, "I like that

population. **(Figure: Q12)**
Our experience confirms a key theme of conversations about CBE in the policymaking community.

CBE is often discussed as strong option for students juggling work, family obligations, and other commitments. The students we heard from agreed. The flexibility offered by CBE programs makes them attractive, particularly to individuals who have many responsibilities beyond the classroom and to those who appreciate the ability to

students attended a variety of different programs, the data does not offer an objection time to completion measure, but does evidence a fair amount of optimism about individual progress. **(Figure: Q9)**

Our focus group conversations mirrored the

Q9 **Based on your expectations when first enrolling in a CBE program, how long is it taking you to finish your courses?**
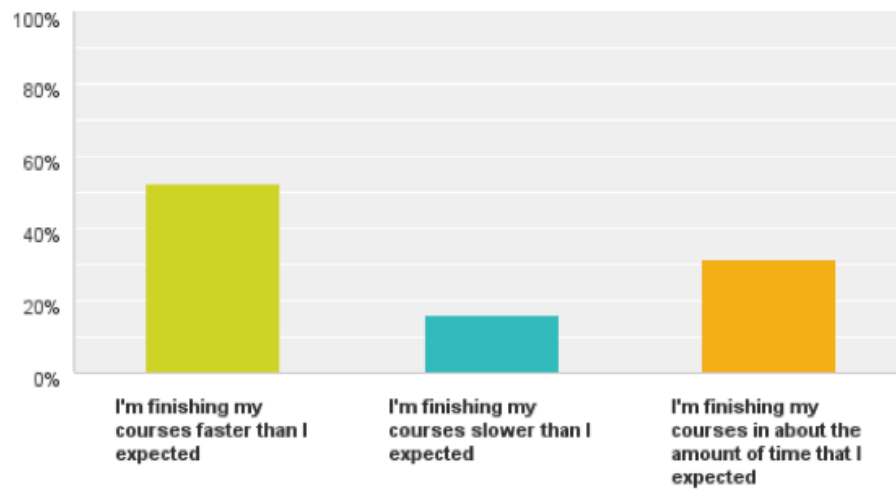
learn in the way that works for them.

Pace

Following up on questions about flexibility, we explored the speed at which students moved through their programs. The theory behind CBE is that students can move more quickly or slowly as their preferences and schedule allow. Our results supported this assumption. Most of the students appeared to move faster through the program than they had initially expected, though a minority were taking more time to complete.

CBE students were optimistic about their progress compared to initial expectations. Over half of our survey respondents (53 percent) were finishing their programs faster than they expected. Another thirty-one percent were finishing their courses at the pace they expected. In other words, over 8 in 10 respondents were moving through their programs faster or as fast as they expected. Given

survey responses. Several students we heard from were on pace to graduate in shorter periods of time compared to traditional two- or four-year programs. The ability to test out of courses or complete courses in less than two weeks allowed some students to quickly move through entry-level skills they had already mastered. Many were on track to graduate in a year and a half rather than two years. There were even a couple students on track to finish their associate's degree in less than a year. One student was on pace to graduate in five months. A student at Brandman, who had only been in his CBE program for three months, shared that he was on track to finish his program even earlier than he expected, even though he was already expecting his pacing to be faster than a traditional program. The open pacing of CBE seemed to be working well for a significant portion of the students.

In contrast with some of the students who completed their programs faster, we also spoke with

others who were taking longer than they thought to finish. Some students may take significantly longer to complete their degrees than traditional two- or four-year students if life gets in the way. Perspectives on why this occurred and whether it was a problem varied. One student shared that he felt he was very motivated and on top of his classes, but he was only on his third class in five months. Courses were taking a while, but it appeared to be working for him, even if he was progressing slower than he had hoped. This perspective exemplified the view shared by many that timing in general was less important to them, and that it was more important for them to simply finish what they started. On the other hand some students shared they were more concerned that the option to take a slower pace could make finishing harder. This concern is well supported by research showing that students who attend school part time and thus take longer to complete degrees have lower success rates.[10]

The stories paint a nuanced picture of pacing in CBE. Generally our conversations met expectations that students can move quickly through programs, or adjust schedules around other life commitments. The vast majority of students we spoke to were moving through their program as fast or faster than they had expected. Moreover, several of those who were moving more slowly needed the flexibility to do just that. On the other hand, a minority of students shared frustration that they were moving too slowly through the program. The conversation on pacing lead quickly to a discussion about motivation, learning style, and the conditions under which CBE works for students.

Learning Styles and Motivation

Across the board, students described motivation as essential to success in CBE. On one hand, this is unsurprising as motivation is a critical component to success in any post-secondary education program. However, we wanted to know whether the ability to set deadlines and complete a degree "at-your-own-pace" would place greater emphasis on an individual's motivation to complete. Flexibility actually appeared to affect students differently, though most participants emphasized that CBE works best for mature, self-motivated students.

A subset of students expressed the flexibility provided by CBE programs could increase motivation. For example, a highly motivated student who excelled at self-study said having to come to campus was actually holding him back and he felt like he could get more done if he had more freedom to complete exams, quizzes, and tests on his own. A student at Brandman shared that flexibility and motivation can go hand in hand to benefit certain learners. He explained that sometimes he would encounter a particularly difficult section or topic, and that he would find himself procrastinating because of the daunting material. However, he would change gears to focus on another competency and revisit the hard material later when he was feeling more motivated to work on it. For this student, flexibility provided the opportunity to overcome procrastination in a productive manner.

Generally, we heard that CBE did require individuals to have more self-motivation to complete than traditional programs. Several participants mentioned the importance of staying focused on achieving their degree, which helped them stay on track. One student from Broward shared, "[Motivation is] one of the most important things. You have to be driving, have to have this goal that you're moving toward. I don't believe anybody that doesn't have motivation would get into this program." Conversely, students struggling with the CBE structure referenced lack of motivation as a problem. For example, one woman on admitted she was "not motivated." She struggled to complete the modules on her own, not because they were too difficult or unclear, but because she had a hard time motivating herself without deadlines.

Consistent with these themes, the overwhelming majority of students currently in CBE programs said CBE is not a good model for every student.

"[Motivation is] one of the most important things. You have to be driving, have to have this goal that you're moving toward. I don't believe anybody that doesn't have motivation would get into this program."

One student in our focus groups told us they believed CBE would not be ideal for younger students. Another student said they believed that less mature students would probably struggle in CBE programs. For these students, there could be a downside to the flexibility. If students do not finish a project by a set deadline, their instructors simply send them a reminder to get back on track. There is no failure or punishment. The ability to push back a deadline for any reason allowed for more procrastination in the eyes of several individuals.

This feedback is important for the policymaking community. Our conversations found many students benefiting from the CBE model. Bright motivated students preferred advancing at their own pace rather than forcing to move more slowly than they needed to in a traditional classroom. Busy, mid-career students appreciated the ability to structure learning around competing priorities.

However, the lack of structure is not likely to work for many students who need regular classes and clear deadlines to help motivate them to complete their post-secondary degree. Younger students and those needing greater external motivation might perform better in a traditional format. Moreover, students requiring the greatest academic support might flounder with CBE's heavy emphasis on individualized learning. Though

CBEw offers benefits to many students who need the flexibility to complete their degrees, the innovative model is not for everyone.

Support from Coaches, Advisors, and Classmates

To mitigate concerns with CBE's need for individualized learning, some CBE programs have created supports to help students stay motivated and on track. Some programs also give students the opportunity to interact with their peers for assistance, support, and to collaborate on work. The formats of CBE programs range from very little face-to-face interaction, to a high level of face-to-face interaction with teachers and peers. CBE students generally reported less need for face-to-face interaction with instructors and peers compared to traditional students, though a significant minority rely on student services.

We included a question in our survey asking students whether they valued face-to-face interaction with an instructor. We used a scale of 1 to 5 with 5 being "very important" and 1 being "not important." The weighted average reported by CBE students was about 2.5 compared to 3.7 for non-CBE students. A question about face-to-face interaction with peers showed similar results. CBE students needed face to face interaction with instructors and peers less than non-CBE students.

Q14 How important is face-to-face interaction with the instructor when learning new material?

Answered: 267   Skipped: 21
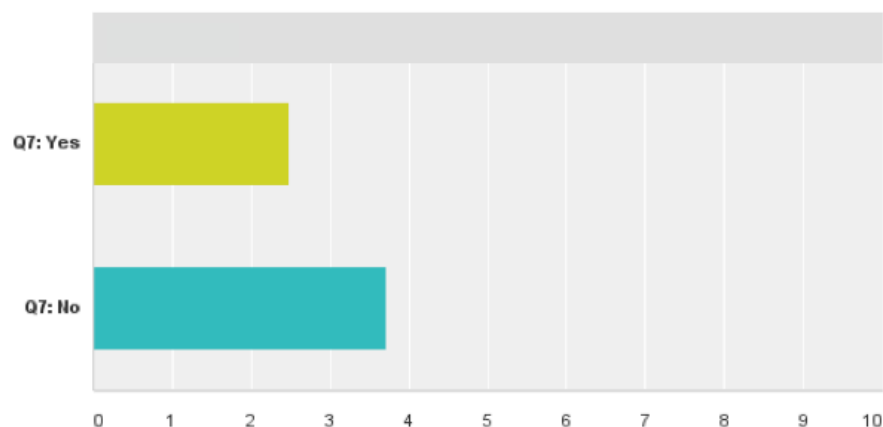
Although it is worth noting that about 1 in 5 CBE students reported that face time with an instructor was "important" or "very important." **(Figure: Q14)**

Consistent with the survey results, several focus group participants downplayed the importance of interacting with other students in order to learn material. One student explained how face-to-face interaction with her instructor was more helpful in terms of keeping her accountable, not necessarily that she learned the material more quickly or thoroughly. More independent students said in-person instruction is not important to them, and that they did not miss coming to campus for courses. However, even these students said they would like to have a way to speak to a professor in real time, especially when a project comes back graded and students received a "not-yet" grade, indicating that the student has more work to do. Participants agreed that even if there was no required face-to-face interaction with an instructor, there should be a way to get help and answers to questions in real time. Some students suggested virtual office hours using audio and video software as a way to facilitate real-time interaction.

There were many students during the roundtables that spoke highly of support services offered by their programs. Broward students had access to an individualized online pace chart, and several students mentioned it was helpful for keeping them on track. Other programs give students a central location to discuss their pace in person with advisors and coaches. Students at Match Beyond were able to come to campus for assistance, including on weekends, to talk about their pace with their advisors and counselors. Students at Match Beyond also received academic coaches who would help move them through the program and encourage them to complete. Several students found this extra support helpful.

Whether support is in person, virtual, or a mix of both, students expressed a desire for a variety of services. One young woman's story is illustrative of why this is the case. Sherry Glover, an online CBE student learning through Southern New Hampshire University, shared her perspective on social and academic support with us. Sherry was a CBE student at a time when she had just become a new wife and mother. She explained she really enjoyed the flexibility of the program because it gave her the opportunity to focus on both school and family. She said her coach was extremely understanding of her life circumstances and was always willing to talk about the personal circumstances that slowed her pace through the CBE program. However, Sherry explained she did not feel like she had the same support when it came to the actual curriculum and completing competencies. She found some of the work really difficult because she wasn't able to get the academic support she needed. The right blend of social and academic support would have given Sherry the boost she needed to feel confident in her studies.

Despite desire from certain students, providing peer support services may prove difficult for CBE programs. Because students are all at potentially different places in the curriculum, even if they are part of the same program, learning from peers presents a challenge. One student said they received zero face-to-face interaction with other students unless they attended optional sessions on Saturday. They also had access to an online discussion forum and email, but no other virtual interaction beyond that. Another student said answering emails of other students took too long, and in many instances they felt it would have been faster to work through a problem in person.

The lack of face-to-face interaction with peers could be cause for concern considering workforce demand for "professional" or "soft" skills like teamwork, networking and emotional intelligence. For example, a recent paper from the National Bureau of Economic Research finds evidence that the labor market increasingly rewards greater social skills with higher wages.[11] Tellingly, one student flagged for us that they never got to discuss thought processes or ask questions of other students, which this student thought was important for preparing for the workplace and developing soft skills. Students in search of skills like networking and developing emotional intelligence may have a difficult time developing them in CBE programs.

The Match Beyond program tries to address this issue specifically. One student shared that he appreciated the professionalism of Match Beyond staff because it helped prepare them for the workforce. The focus group participants said their relationship with the Match Beyond tutors was helpful in teaching them soft skills and how to act professionally. Strong in-person support from coaches and tutors may be one way to mitigate the consequences of CBE's individualized learning approach for learning social skills. Nevertheless, even strong one-on-one coaching likely cannot replace team projects offered by other education models.

Our conversations revealed several takeaways related to student support. First, CBE students generally expressed less need for face-to-face interaction than traditional students. Second, despite this, most students still wanted to have the ability to connect with a coach or instructor as needed whether in person or virtually. Third, students who do need additional support should have opportunities for comprehensive services including both academic and personal guidance. Finally, because CBE is highly individualized by design, peer support may prove harder to deliver thereby making it more difficult for students to develop social skills necessary to workplace success. As a result, CBE programs can be a great fit for a student who already has strong interpersonal skills, but needs to learn a specific job related skill. These programs may not offer the best option for students looking to build "professional" or "soft" skills such as teamwork, emotional intelligence, and networking. Programs like Match Beyond with strong coaching services can help mitigate this concern.

Job Skills and Employer Involvement

A core motivation for competency based education is a belief that training students for specific skills will better prepare them to excel on the job. Developing job ready "soft" skills may prove challenging for CBE, but there remain many other workforce specific skills that lead to career success. We asked students a series of questions about the connection between CBE and the workforce. Responses were generally positive about the

programs, though tempered by the fact that many of the students had yet to use their skills on the job. Moreover, CBE students appear to have much more confidence in their readiness for the workforce than non-CBE students.

Not surprisingly, most students we spoke with were enthusiastic about employers being involved in curriculum design for CBE programs. Students shared that if employers could show specific skills or competencies were desirable, it would benefit all stakeholders if they contributed to the curriculum. The results are consistent with expectations that CBE should teach competencies that have labor market value.
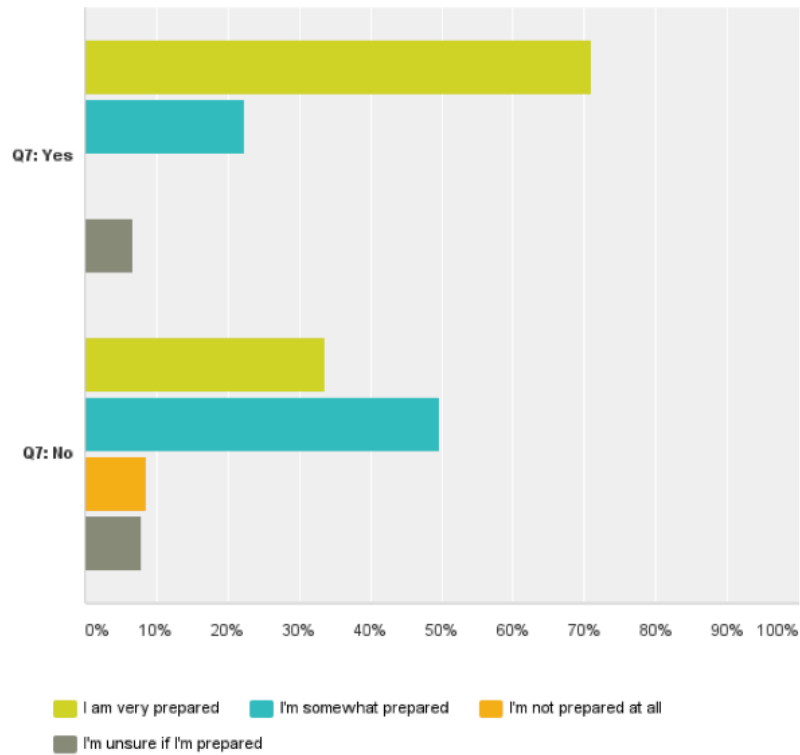
The majority of CBE students we surveyed believed CBE was better at workforce preparedness than traditional postsecondary education programs. More than seven in 10 students in CBE programs felt prepared for their career compared to roughly a third of traditional students. This significant difference suggests CBE students have far more confidence that the skills they are learning connect to actual jobs. **(Figure: Q19)**

Among our focus group participants, Broward students expressed the most optimism about their jobs prospects. The goal of Broward's IT program is to prepare students to take industry certifications. Since these are the same certifications that traditional students are working toward, participants thought the content of their curriculum was largely the same as traditional students. However, these students explained that believe they are held to a higher standard due to how they are assessed, and the rigorousness of their assessments would help them in the workforce. They shared that this was because their assessments focused on demonstrating actual skills as if they were on the job, rather than regurgitating information. One participant mentioned that even though she is less than halfway through the program, she feels she already has many of the skills to be successfully employed in IT.

Students at other campuses shared responses about job readiness ranging from outright optimism, to a "wait and see approach." For instance,

Q19 Do you think your academic program has prepared you well for your career?

Answered: 263   Skipped: 25

Legend:
- I am very prepared
- I'm somewhat prepared
- I'm not prepared at all
- I'm unsure if I'm prepared

one student at Match Beyond shared, "My favorite part is definitely the projects, the actual work. It is different than being in an actual college class. It's more real world based. I feel like I'm actually learning things that will help me with life in general." Another student shared that the simple demonstration of time management, intrinsic motivation, and independence required to succeed in CBE should be valuable to employers. However, several students thought it was too early to tell. They felt they would not know if they were prepared well for a job until after they graduated and were working.

Taken together, the conversations revealed a positive outlook about CBE's ability to prepare students for the workforce. CBE students clearly expressed stronger confidence in their career readiness than traditional students. The optimism at Broward was noteworthy given the clear link between industry recognized credentials and the content of the program. The cautious responses from several students also offer a helpful reminder

"My favorite part is definitely the projects, the actual work. It is different than being in an actual college class. It's more real world based. I feel like I'm actually learning things that will help me with life in general."

that we will need more information about the outcomes of students in CBE programs to accurately judge their success.

Cost

We also examined the assumption that CBE is a cheaper alternative to traditional postsecondary education programs. A full analysis will require additional data, but our conversations revealed varied perceptions about CBE program costs among students. CBE is most often seen as more affordable than traditional programs, but our preliminary research suggests these programs do not necessarily save all students money. [12]

CBE programs have different pricing structures depending on the institution or program type. For instance, some programs still use the credit framework to assess cost. Colorado State University-Global and University of Maryland University College both offer CBE programs but charge

students very different prices. Some programs seem more affordable -- Colorado State University-Global charges $350 per credit, while University of Maryland University College charges $266 per credit.[13] There are also variations in cost for students depending on their state of residency.[14] However, paying by credit hour does not necessarily make CBE program more affordable if the credits cost the same as a traditional institution nearby. Some CBE programs allow students the flexibility to take one class and pay for it at a time without tracking credits or units. Lastly, some institutions do not use the credit hour to assess cost in their CBE programs at all, and instead give students an "all you can eat" pricing model, where they pay for a set period of time (say, a semester) and take as many courses as they want during that time.[15]

"... [I] would be paying at least what [I] was expecting to pay for a whole degree for [the cost of] one semester in a traditional program."

Several students we spoke to believed they were saving money on their CBE program when compared to the cost of a traditional program. For example, one student at Brandman shared that his CBE program was, "much cheaper than a public or private institution… [I] would be paying at least what [I] was expecting to pay for a whole degree for [the cost of] one semester in a traditional program." A student at Broward explained he had also looked into cost and found that his CBE program was cheaper. He shared, "from what I understand and what I've looked at before this was quite a bit cheaper. I'm doing this program to get a certificate." One student explained he especially liked the flexibility of paying as he went: "For me it is just pay as you go. I'll take a class, pay for it, take a class, pay for it." Another student who appreciated the opportunity to pay for one class at a time agreed that it offered flexibility and that it seemed like she was saving money. For instance, she said, "Well, I'm just doing it class-by-class, I'm not doing the whole program. My Excel class costs $190…it's just a pass or fail grade."

"For me it is just pay as you go. I'll take a class, pay for it, take a class, pay for it."

The variation in time to degree creates some difficulties in studying cost. For example, students who progress quickly through an "all you can eat" pro-

gram can likely save money. But not all students progress through CBE programs at a quicker pace than traditional programs, and time to completion varies depending on the student. Some students may need more time to focus on a particular course, thus paying more. Students in the same program could end up paying significantly different amounts for the same competencies.

It is worth noting again that many CBE students are not yet eligible for federal financial aid.[16] Some students we spoke to were enrolled in programs that provided financial aid, while other programs did not. Many, if not all, of the students interviewed received some form of financial aid to attend College for America with Match Beyond. However, students at Salt Lake Community College were ineligible for federal financial aid if they are enrolled in the CBE program. Whether students can receive federal aid, including loans, is one factor that could have had an impact on the feedback students gave us about cost being a factor for them.

About half of the students we spoke with in focus groups and in-person interviews cited cost as one factor for their motivation to enroll in the program. The other half of respondents said cost was not a factor for them personally, and talked about other benefits, like the flexibility of the program and the ability to finish faster than a traditional two-year program as the main reasons that they enrolled. However, because cost can depend on how many classes a student decides to take in a given time, this degree of variation was reflected in our conversations with CBE students. Some students said their pace made the cost the same as in traditional education programs, including online education programs. We heard from some students that they were not able to tell us the exact cost of the CBE program they were enrolled in, but they said they thought cost was roughly the same as traditional programs at their institution. While the variation in cost of CBE programs depends on the institution, pricing structure, and student's pace, the main takeaway from our research is that some students, but not

all students, can save money with CBE, and that some students appreciate the flexibility to pay as they go.

Awareness of CBE

As an innovative form of higher education delivery, we suspected many people may not yet know about CBE programs. Moreover, the term "competency based education" itself could prove difficult to understand. We explored student perceptions of awareness about their CBE programs and how they learned about CBE opportunities. The students generally thought few people were familiar with CBE and shared a variety of experiences discovering their programs.

Many students told us their friends, families, and traditional college classmates did not know what competency-based education is. Peers and communities might be familiar with the name "Southern New Hampshire University" or "College for America" as brands or institutions, but they would not know that these institutions provide CBE programs or even understand CBE. Several students shared, however, that they could explain the program to friends, family, and other students without too much trouble. Focus group participants believed CBE programs would be a lot more popular if they were better publicized along with the benefits of the learning style. Other students speculated that small programs sizes contributed to the lack of awareness. The SLCC in particular cited this reason.

We also asked students how they themselves found out about CBE. Responses varied widely to our questions about CBE awareness and why they enrolled. At Broward, most of the students were already considering an IT program and were prompted to pursue the competency-based path by administrators or teachers. Another student mentioned that he had no intention of enrolling in Broward at all until he saw the CBE option on the website. A Brandman student explained that she found out about CBE through word of mouth, and that her husband and cousin had both been through CBE programs before.

Interestingly, one student encountered skepti-

cism from fellow classmates. He explained that he frequently received questions from classmates outside of his CBE program, asking him why he chose CBE despite the self-motivation required. Outside classmates who actually had a sense of the program perceived the self-pacing to be a big downside. The perspective is consistent with our survey data suggesting that CBE students are far more likely to prefer going at their own pace than students not in those populations. Student perception of CBE could depend on whether a student flavors flexibility.

The early, innovative CBE programs we visited appeared to recruit through school administrators, the internet, and word-of-mouth despite the lack of awareness about CBE. As programs grow and outreach increases we would expect more people to learn about this new post-secondary option. Despite the jargon, students seemed to feel that they could explain the concept fairly easily. However, the concerns expressed about the motivation required offers helpful nuance to the conversation. Policymakers and program directors should understand that CBE likely will not work for every student. To the extent that programs wish to help more individuals they may need to invest in supports to help students stay on track, and communicate those benefits to prospective students.

Policy Recommendations

1. The Department of Education must get the CBE experimental sites off the ground.

After announcing their experimental CBE sites, the Department of Education has yet to get them off the ground.[17] Institutions have applied to take part in the experiment, but are awaiting guidance from the Department. Some institutions have asked repeatedly for guidance to no avail.[18] CBE experiments are critical for researchers, institutions, and policymakers to further understand what is best for students in CBE, especially given the small scale of these programs thus far.

With reauthorization of the Higher Education Act overdue, combined with the growing interest in innovation in education, it is imperative that stake-

holders understand best practices informed by the experiences and perspectives of current students. We expect that the experimental sites will produce a fuller picture of successes and failures. The Department of Education must open the experimental sites for CBE to allow researchers to learn more about this new way of learning, and to allow more students to experience CBE.

2. Provide clear, consumer-tested information about CBE to all prospective researchers and the Department of Education must further study student outcomes and financial aid delivery at CBE Programs.

CBE's flexibility appears to work best for certain kinds of students, meaning those considering a program must understand what it entails so they can make the right choice. Several types of information would help prospective students make informed decisions.

First, students should also have clear information about the benefits and drawbacks of CBE programs, including information about flexibility and open pacing. Many students we spoke with told us that few of their peers know what CBE is, and that the programs could benefit from more widespread awareness of their benefits. They felt the relative autonomy was a huge potential draw. Conversely, prospective students should have an understanding of the work that it takes to succeed and stay motivated in a flexible program. Awareness about the support services available would also help. Individuals can then decide whether the flexibility is a good fit or they would prefer a more traditionally structured option.

Second, students need clear information about cost. For programs that charge per credit, it should be relatively straightforward to calculate the price of a credential. However, certain cost structures could prove more complex as they vary with time to completion. For example, "all-you-can-eat" pricing models should also show the cost of a degree based on different levels of progress through the program. Students should understand that cost depends on time, access to federal financial aid, and program type.

Third, the goals of CBE programs should also be clear. Is it to prepare students for a certification? Or, is the goal to train students to use a particular program or tool? Prospective CBE students may also appreciate knowing whether employers are involved in designing the curriculum, as students we spoke to believe this helps ensure their degrees will have labor market value.

Finally, any information used to recruit students into CBE programs should be consumer-tested and easy to understand. It should include time to completion, cost, structure, assessment, and industry involvement in programs. In other words, students should have a sense of the benefits and potential drawbacks, as well as what is necessary for student success.

3. Researchers and the Department of Education must further study student outcomes and financial aid delivery at CBE Programs.

A key promise of the CBE system is that it ensures students learn skills valued by the labor market. Policymakers should test this assumption. The best way to do this is through the experimental sites program, which we hope the Department of Education will launch in the coming months. We urge the Department and researchers to examine job placement rate, graduation rates, and student loan repayment rates. If CBE works as designed, students should be able graduate consistently, find a job, and pay down any debt they took out to enter the program. Moreover, the Department should examine these metrics specifically for low-income populations.

Another area where we need more research is financial aid. Currently our federal financial aid system bases aid amounts on the credit hour system. As successful CBE programs expand, we will need a system that alleviates costs for low-income students.

The experimental sites should also explore the best ways to open CBE programs to federal financial aid, including loans, and ensure that students using aid attend CBE programs meeting standards

for completion and workforce outcomes.

4. Ensure that any platform or program used in CBE is technology-friendly, accessible, and optimized for mobile devices.

Many of the students we spoke with stressed they needed better online learning tools. Often students who attended courses on campus or had in-person instruction or advising said they needed better tools for when they were studying on their own. For instance, one student shared he was not able to access one of the CBE programs on his smartphone, which prevented him from working when he wanted to. "I wasn't able to access Test-Out with my phone." Another student shared, "Yes, it would be helpful to access these materials on my phone. I couldn't get out my laptop and was trying to access the videos and simulations." A student from Brandman explained that he was able to access course materials on his iPad, and he felt this made it a lot easier to complete his degree. With CBE students learning in a variety of ways, often on their own, CBE technologies should be optimized for all mobile devices.

Several students also urged program directors to explore innovative applications or improvements to videoconferencing or voice calls to better cope with lack of in-person, peer-to-peer discussions. For example, a student explained, "Discussing 'how did you do that?' 'Why did you do it that way?' Asking students what they're working on, and the social aspect is important. It's important for the workplace, developing job-specific vernacular." Another student suggested, "It would be helpful for students to learn from each other but I'm not sure how it would work. An instructor could set up a day or time to have an online chat about material and those that want to participate could join." Given the research on teamwork and its boost in professional skills in certain fields,[19] we suggest efforts to improve CBE platforms integrate real time peer-to-peer collaboration, support, and better interaction with instructors.

5. Ensure comprehensive academic and social supports are available for CBE learners and tailored to their needs.

Though not all students needed academic and social supports, they generally appreciate being able to interact and socialize with other students and coaches. A subset of these students highly value the ability to interact in person with peers, teachers, and counselors. Competency-based education programs that do not incorporate this aspect of learning into the curriculum should strongly consider adding an in-person component, even if is optional for students. This is where institutions, states, and the Department of Education must get creative to solve challenges relating to advising, coaching, and peer and cooperative learning. All three stakeholders must research the best platforms for academic and social support, including fostering better real time interaction between students, their peers, and their instructors.

"Discussing 'how did you do that?' 'Why did you do it that way?' Asking students what they're working on, and the social aspect is important. It's important for the workplace, developing job-specific vernacular."

It is important to note that there are different types of support including social support, academic support, and general coaching. We learned that students valued each of these differently, and at different times. For example, Sherry Glover wanted robust academic support in addition to her social support, she might have found some of the work more manageable and felt more confident in her studies. The key takeaway is support should be comprehensive and tailored to the student.

One idea that arose during our focus groups is that instructors could host office hours or chats that students can attend virtually, providing students the chance to ask questions and receive answers in real time. Additionally, instructors could run demonstrations for students to observe, analyze, and discuss course-related material in real time with each other to boost collaboration and group work. With CBE students learning on their own, these programs may never fully simulate group work in a traditional academic setting. Nevertheless, they can provide students with the comprehensive academic and social support they need.

Conclusion

Our initial research into CBE finds support for many of its touted benefits. Students rave about the flexibility giving them a chance to build real skills and balance life priorities like work and family. They also express a lot of confidence that specific skills learned will translate to career success. However, the CBE's best traits also come with some downsides. The lack of structure and deadlines means less mature or less self-motivate students could struggle. Several programs have adopted academic and student supports to help students navigate their way to completion. Even with strong support services, however, CBE programs may struggle to provide peer interaction necessary to learning professional skills like teamwork and networking. Our conversations suggest that CBE offers a strong option for mature, motivated students looking to acquire specific career skills.

However, more research is needed on these early CBE programs. Further quantitative analysis would help confirm whether our initial findings hold true as CBE programs evolve. For example, we would want to know whether older students do better statistically or whether some job skills work better in the CBE format than others. Perhaps some institutions will address concerns raised here about teamwork and networking skills by integrating a group-learning component into their CBE programs. Student voices will be essential in figuring out what helps students succeed.

End Notes

1. Robert Kelchen, The Landscape of Competency-Based Education: Enrollments Demographics, and Affordability (January 2015).

2. Anya Kamenetz, Are You Competent? Prove it., The New York Times, October 20, 2013, http://www.nytimes.com/2013/11/03/education/edlife/degrees-based-on-what-you-can-do-not-how-long-you-went.html?_r=0.

3. Anya Kamenetz, Are You Competent? Prove it., The New York Times, October 20, 2013, http://www.nytimes.com/2013/11/03/education/edlife/degrees-based-on-what-you-can-do-not-how-long-you-went.html?_r=0.

4. Amy Laitinen, Whatever Happened to the Department's Competency-Based Education Experiments?, http://www.edcentral.org/whatever-happened-cbe-experiments/.

5. Amy Laitinen, Whatever Happened to the Department's Competency-Based Education Experiments?, http://www.edcentral.org/whatever-happened-cbe-experiments/.

6. Amy Laitinen, Whatever Happened to the Department's Competency-Based Education Experiments?, http://www.edcentral.org/whatever-happened-cbe-experiments/.

7. Amy Laitinen, Whatever Happened to the Department's Competency-Based Education Experiments?, http://www.edcentral.org/whatever-happened-cbe-experiments/.

8. Tom Allison and Konrad Mugglestone, Where Do Young Adults Work?, http://young-invincibles.org/wp-content/uploads/2014/12/Where-Do-Young-Adults-Work-12.4.pdf.

9. Note, this response rate was significantly lower with over 500 of our 800 respondents skipping the question. We cannot say for sure why this occurred, but speculate that many traditional students did not know what competency based education is.

10. Complete College America, Time is the Enemy, 8, http://www.completecollege.org/docs/Time_Is_the_Enemy_Summary.pdf

11. Deming, D. (2015). The Growing Importance of Social Skills in the Labor Market. The National Bureau of Economic Research, NBER Working Paper No. 21473. Retrieved August 26, 2015, from http://www.nber.org/papers/w21473#fromrss.

12. Robert Kelchen, The Landscape of Competency-Based Education, 9, http://www.luminafoundation.org/files/resources/competency-based-education-landscape.pdf.

13. Robert Kelchen, The Landscape of Competency-Based Education, 11, http://www.luminafoundation.org/files/resources/competency-based-education-landscape.pdf.

14. Robert Kelchen, The Landscape of Competency-Based Education, 11, http://www.luminafoundation.org/files/resources/competency-based-education-landscape.pdf.

15. Robert Kelchen, The Landscape of Competency-Based Education, 13, http://www.luminafoundation.org/files/resources/competency-based-education-landscape.pdf.

16. Robert Kelchen, The Landscape of Competency-Based Education, 9, http://www.luminafoundation.org/files/resources/competency-based-education-landscape.pdf.

17. Amy Laitinen, Whatever Happened to the Department's Competency-Based Education Experiments?, http://www.edcentral.org/whatever-happened-cbe-experiments/.

18. Amy Laitinen, Whatever Happened to the Department's Competency-Based Education Experiments?, http://www.edcentral.org/whatever-happened-cbe-experiments/.

19. R. S. Hansen, "Benefits and Problems with Student Teams: Suggestions for Improving Team Projects," Journal of Education for Business, vol. 82, pp. 11-19, 2006.